July 31, 2009

Jim Brodrick
US Department of Energy
1000 Independence Ave., SW, 1J-018
Washington, DC 20585

Subject: Draft Energy Star SSL Criteria for Outdoor and Parking Garage Luminaires

Dear Jim:

The following is Cree's feedback on the subject proposed Energy Star Criteria:

- First, we applaud and support DOE's leadership on the Energy Star program. The wisdom and leadership DOE has provided in focusing the industry's efforts on quality as well as energy savings is an invaluable asset to the Solid State Lighting industry. We are pleased to be an active supporter of the DOE Quality Advocates and Energy Star Partners programs.

- We also agree in principle with DOE's approach of setting minimum efficacy requirements for Outdoor SSL luminaires, and ensuring the light delivered by these fixtures performs as intended in the actual application.

- We have reviewed the proposed Fitted-Target Efficacy (FTE) metric, as well as the similar Luminaire System Application Efficacy (LSAE) metric proposed by the ASSIST group at LRC/RPI. We have also discussed both of these approaches in detail with several of our SSL Outdoor luminaire customers.

- Our conclusion, as well as the consensus of several major manufacturers, is that the FTE metric is well-intended, but is lacking in several key areas:

  - Evaluates only one fixture/pole in a system; does not comprehend contributions of other luminaires in the overall roadway or area system
  - Does not follow IES RP-8 or RP-20 recommended light levels; introduces totally new concepts and vocabulary
  - Does not use absolute light levels, which makes comparison across multiple fixture types and lighting technologies difficult

- The LSAE approach seems more reasonable to us and addresses the deficiencies cited above. Even though the present document for LSAE addresses only parking lots using RP-20 requirements, the method is adaptable for roadways by using RP-8 requirements. Therefore, LSAE requires fine tuning before it can be used broadly.

- We agree with the intent of using a suitable application efficacy metric for inclusion in the Energy Star Criteria, but since neither FTE or LSAE seem to be fully ready for broad implementation, our overall suggestion and recommendation to DOE is to DELAY the publication of this Energy Star Criteria until these issues can be resolved. The upcoming meeting of the IES Street and Area Lighting Conference in Philadelphia September 13-16 may be auspicious timing for vetting some of these issues. Most of the industry experts on the topic will be available at this time, and this could be an excellent opportunity to quickly address these concerns and move the Outdoor Energy Star Criteria forward on a track that ensures both quality and energy savings – the same wise direction that DOE chose for SSL 1.1 by including and supporting IES LM-79 and LM-80 in that publication.

As you are aware, Cree is working very hard to lead and enable the Solid State Lighting industry, and, in general, we support any initiative that accelerates SSL adoption. We believe that getting this right the first time is equally important as getting it done quickly, and hope you can either amend the proposed criteria to address these concerns or convene the appropriate experts to come up with a solution as soon as possible. I would be happy to help facilitate this in any way I can.

Thank you again for your leadership in Solid State Lighting, and for your consideration in this matter.

Sincerely,

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